



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,843	09/08/2006	Stephen John Kennedy	AMK-117-588	3725

23117 7590 03/15/2011  
NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER
----------

LAUX, JESSICA L

ART UNIT	PAPER NUMBER
----------	--------------

3635

MAIL DATE	DELIVERY MODE
-----------	---------------

03/15/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,843	<b>Applicant(s)</b> KENNEDY, STEPHEN JOHN	
	<b>Examiner</b> JESSICA LAUX	<b>Art Unit</b> 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,9,14,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9,14,18,19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is responsive to the amendment filed 1/7/2011. Accordingly the claims have been amended, cancelled or withdrawn and the spec amended as appropriate

#### ***Response to Arguments***

Applicant's arguments filed 1/7/2011 have been fully considered but they are not persuasive.

Applicant's remarks regarding claim 1 are not persuasive because the limitation of "injected" is considered to be a product by process limitation, see below.

Applicant's remarks regarding claim 19 are not persuasive. The claim does not require an order to the steps. It merely requires providing first and second out metal plates spaced apart with spheres in between, which GB 1070874 clearly discloses and that a polyurethane elastomer material is injected to be fill the space between the plates. Applicant's remarks that the material GB 1070874 is not injected are not persuasive as broadly defined injected means to insert between other elements and the material of GB1070874 is injected between the side forms and the spheres, the claim doe snot require it to be injected between the plates, but to fill the space between the plates. The material of GB 1070874 clearly fills the space between the plates even though it is injected prior to the placement of the second plate.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3635

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-,9,14,18,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB1070874 in view of Kennedy in view of Swann et al (483004.**

Claims 1,9,14. GB1070874 discloses a structural sandwich plate member comprising:

first and second outer plates (3 as seen in figure 1, which can be of metal as noted on page 4, lines 8-14);

a core of compact polyurethane elastomer (2; Page 2, lines 123-125) between the first and second outer metal plates and bonded thereto with sufficient bond strength to transfer shear forces therebetween where the bond strength is great than 3MPa; and

a plurality of lightweight forms (1) within the core, wherein said forms are hollow spheres with a solid skin arranged in a single layer and have a diameter equal the distance between said outer metal layers (as seen in figures 1-2).

GB1070874 does not expressly disclose that the bond strength is greater than 3MPa or that the hollow spheres are polypropylene with a diameter equal to or between 20 and 100mm and filled with a gas. However, the bond strength appears to be a function of the core material and the material of the outer plates. As GB1070874 discloses the same materials for the outer plates and the core as claimed then the panel of GB1070874 has a bond strength greater than 3MPa.

GB107874 discloses that the hollow spheres may be made of a plastic or any suitable material (page 3, lines 2-5) and of any suitable size depending on the specific

Art Unit: 3635

use requirements (page 2, lines 34-48). Additionally it is noted that applicant discloses in the specification at page 2, lines 28-35 that polypropylene sphere forms are known and common and readily available.

It is common and well known in the art to provide polypropylene spheres of a diameter equal to or between 20 and 100 mm for embedment in thermoplastic cores. Swann et al discloses a panel composition consisting of outer plates with a thermoplastics core material where the core has macropsheres formed of polypropylene (Col. 4, lines 8-14) with a diameter equal to or between 20 and 100 mm (Col. 3, lines 5-10) and filled with a gas (Col. 3, lines 8-9). It would have been obvious to one of ordinary skill in the art to modify the spheres of GB107874 to be made of polypropylene and of the claimed diameter and filled with a gas as one of ordinary skill in the art has good reason to pursue the known options within his or her technical grasp and substitute one for another. In the instant case it would have been obvious for at least the reason of the availability of the material and the desired strength based on the intended use (where determining appropriate material and size to accommodate a desired strength are routine engineering calculations).

It should be noted that the limitation "injected" in claim 1 is considered a product-by-process limitation. The patentability of the product does not depend on its method of production. Determination of patentability is based on the product itself. See MPEP 2113. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed.Cir.1985).

Art Unit: 3635

In the instant case the product of claim 1 is the same as the product of the prior art even though it may be made by a different process.

Claim 18. GB107874 in view of Swann discloses the member as in claim 1 above, but GB107874 does not expressly disclose the thickness of the outer plates, but does disclose that the size is dependant on the intended use of the panel and the desired strength characteristics. One of ordinary skill in the art would have readily recognized that the dimensions could have been changed and it has been held that changes in sizes are viewed as obvious absent any unpredictable results. One of ordinary skill in the art would have recognized that by dimensioning the boards as claimed would result in a panel able to withstand desired forces. Determining an appropriate plate thickness, such as the claimed thickness, would have been recognized as routine engineering and not yield unpredictable results.

Claim 19. GB1070874 in view of Swann et al disclose a structural sandwich plate member as in the claims above and further define a method of manufacturing that structural sandwich plate member comprising the steps of :

providing first and second outer plates in a spaced-apart relationship and a plurality of lightweight forms within the space between said plates (GB 1070874 page 3, line 103-page 4, line 15), wherein said forms dare hollow polypropylene spheres (Swann, see above)

injecting uncured polyurethane elastomer material to fill the space (GB 1070874 page 3, lines 107- page 4, lines 15) defined between said outer plates and around said plurality of forms; and

allowing polyurethane elastomer material to cure to bond said outer plates together with sufficient strength to transfer shear forces therebetween (page 3, line 103-page 4, line 115).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA LAUX whose telephone number is (571)272-8228. The examiner can normally be reached on Monday thru Thursday, 9:00am to 5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eileen Lillis/  
Supervisory Patent Examiner,  
Art Unit 3635

/J. L./  
Examiner, Art Unit 3635